

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch
690 Walnut Ave. St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002676**Date Inspected:** 24-May-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Sun Wei, Hu Wei Qing**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG & Tower**Summary of Items Observed:**

Caltrans Quality Assurance Inspector (QAI) Bruce Berger arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QAI observed and/or discovered the following.

BAY 1

The Caltrans QAI observed welding utilizing the dual process WPS-B-T-2342-U1 (U-rib)-3 welding procedure specification (WPS) for closed rib welding of the Production Monitoring Test (PMT) #1 for Production Panel DP598-001 and DP585-001 on closed U-rib Partial Joint Penetration (PJP) welds in Bay #1. ZPMC welding personnel performed Gantry Machine, Gas Metal Arc Welding (GMAW) for the root pass and immediately performed Gantry Machine, Submerged Arc Welding (SAW) for the cover/final pass on PMT #1, using gantry machine #1. Upon completion of the SAW pass on U-rib PJP welds on PMT #1 Visual Testing (VT) was performed on weld #1 through #6 by ZPMC personnel and was accepted then VT was verified by the Caltrans QAI. Ultrasonic Testing (UT) was then performed by ZPMC inspector and PMT #1 was determined to be acceptable. Macro etch samples were selected by the Caltrans QAI on PMT #1.

The Caltrans QAI observed the GMAW root welding utilizing the dual process WPS-B-T-2342-U1 (U-rib)-3 WPS for closed ribs of deck panels DP598-001 weld joints 001 through 010 and DP585-001 welds 001 through 006. Some of the essential welding variables were observed and recorded in the table below. The welding observed appeared to be in compliance with the code and specification.

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BAY 7

This QAI observed tack welding with the shield metal arc welding (SMAW) process on floor beam welds FB039-002-079 and FB013-001-079. Further SMAW welding was observed on welds FB011-004-011 and 012 and FB010-006-011 & 012.

BAY 8

This QAI observed SAW of complete joint penetration welds on WSD SA226-10A and ESD1-SA348-10B. This QAI also observed SMAW welding of rings for ESD1-SA309 weld 7 A/B, SSD1-SA326 and SA266 along with SSD1-SA270.



Item	Weld Identification	Applicable WPS	CWI Name	Amperage	Voltage	TravelSpeed	Preheat Temp	Remarks
1	FB011-004-011	WPS-B-P-2112	Hu Wei Qing	170	25.0	117mm/min	47	058102
2	FB010-006-011	WPS-B-P-2112	Hu Wei Qing	171	25.3	115mm/min	45	066261
3	ESD1-SA-348-10A	WPS-B-T-3221-B	Lu Li Qing	605	30.9	473mm/min	N/A	045270
4	DP598-001-010	WPS-B-T-2342-U1	Sun Wei	366	30.2	532mm/min	25	Chen Jie 059468
5	DP598-001-009	WPS-B-T-2342-U1	Sun Wei	362	30.4	532mm/min	25	Zhang Shao Hui 059403
6	DP598-001-006	WPS-B-T-2342-U1	Sun Wei	360	30.5	532mm/min	25	Jiang Ting Quang 062265
7	DP598-001-005	WPS-B-T-2342-U1	Sun Wei	374	30.2	532mm/min	25	Gao Xin Dong 059361
8	DP598-001-002	WPS-B-T-2342-U1	Sun Wei	365	30.3	532mm/min	25	Xiang Jie 059378
9	DP598-001-001	WPS-B-T-2342-U1	Sun Wei	368	30.0	532mm/min	25	Xiang Huan Feng 059416

Summary of Conversations:

No conversations held today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials

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for your project.

Inspected By: Berger, Bruce

Quality Assurance Inspector

Reviewed By: Cochran, Jim

QA Reviewer